UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

JOYAL PRODUCTS, INC. Plaintiff, v. JOHNSON ELECTRIC NORTH AMERICA, *et al.*, Defendants.	:	Civil Action No. 04-5172 (JAP) **OPINION**

PISANO, District Judge.

Presently before the Court in this patent infringement case is the parties' request for claim construction. Plaintiff Joyal Products, Inc. ("Joyal") has brought this action against Johnson Electric North America, Inc., Johnson Electric Consulting, Inc., Johnson Electric Industrial Manufactory, Ltd., and Delphi Corporation ("Defendants") claiming that Defendants infringed on Joyal's patent, United States Patent No. 5,111,015 (the "'015 Patent"), titled "Apparatus and Method for Fusing Wire." This patent relates to a particular method for making electrical connections in the production of a class of machines known as dynamoelectirc machines, which includes electric motors and generators.

The instant action was filed on October 21, 2004. Plaintiff filed an Amended

Complaint on February 9, 2005. A Second Amended Complaint joining additional defendants was filed on June 24, 2005, and a Third Amended Complaint was filed on July 24, 2006. Thereafter, on April 5, 2007, the parties filed a Joint Claim Construction Statement identifying agreed upon claim term constructions along with disputed claim terms and proposed constructions for the disputed terms. Each party subsequently fully briefed the issue of the proper construction of the disputed claim terms. The Court held a *Markman* hearing on September 24, 2007. This Opinion addresses the proper construction of the disputed claim terms.

I. Standards for Claim Construction

In order to prevail in a patent infringement suit, a plaintiff must establish that the patent claim "covers the alleged infringer's product or process." *Markman v. Westview Instrs., Inc*., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Consequently, the first step in an infringement analysis involves determining the meaning and the scope of the claims of the patent. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 988 (Fed. Cir. 1995). Claim construction is a matter of law, *Markman v. Westview Instrs., Inc*., 52 F.3d 967, 979 (Fed. Cir. 1995) *aff'd* 517 U.S. 370 (1996), therefore, it is "[t]he duty of the trial judge . . . to determine the meaning of the claims at issue." *Exxon Chem. Patents, Inc. v. Lubrizoil Corp.*, 64 F.3d 1553, 1555 (Fed. Cir. 1995).

In *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), the Federal Circuit emphasized that "[i]t is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." 415 F.3d 1312 (internal

quotations omitted) (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996) ("we look to the words of the claims themselves . . . to define the scope of the patented invention"); *Markman*, 52 F.3d at 980 ("The written description part of the specification itself does not delimit the right to exclude. That is the function and purpose of claims."). Generally, the words of a claim are given their "ordinary and customary meaning," which is defined as "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Id.* at 1312-13 (citations omitted). In this regard, the Federal Circuit has noted that

> It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed. Such person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field. The inventor's words that are used to describe the invention--the inventor's lexicography--must be understood and interpreted by the court as they would be understood and interpreted by a person in that field of technology. Thus the court starts the decisionmaking process by reviewing the same resources as would that person, viz., the patent specification and the prosecution history.

Id. (quoting *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed.Cir.1998)).

In the process of determining the meaning of a claim as understood by a person skilled in the art, a court may look to various sources from which the proper meaning may be discerned. These sources include "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Id.* at 1314. While a court is permitted to turn to extrinsic evidence, such evidence is generally of less significance and less value in the claim construction process. *Id.* at 1317. Extrinsic evidence would include

evidence that is outside the patent and prosecution history, and may include expert testimony, dictionaries and treatises. *Id.* The Federal Circuit has noted that caution must be exercised in the use of extrinsic evidence, as this type of evidence may suffer from inherent flaws affecting its reliability in the claim construction analysis. *Id.* at 1319 ("We have viewed extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms."). While "extrinsic evidence may be useful to the court, . . . it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence."

II. The Disputed Claim Terms

The parties have submitted a Joint Claim Construction Statement in which they have identified sixteen disputed claim terms. The Court will address each of these in turn.

1. "fusing method of forming a fused joint"

This disputed phrase appears in Claims 1 and 16 of the '015 Patent. Plaintiff has offered two alternate constructions. Plaintiff's first proposed construction for this phrase is as follows: "a method of making a mechanical surface adhesion bond between electrically conductive elements by applying heat to soften the elements without melting them and pressure to force the softened elements together." Alternatively, Plaintiff proposes this more concise construction: "method of bonding electrically conductive elements together by applying heat and pressure to force the elements together." Defendants, on the other hand, argue that "fusing method of forming a fused joint" means: "method of making a connection between two or more parts resulting from uniting or blending in a whole by melting together."

The first obvious difference in the two proposed constructions centers on the question of whether the joining of the two parts to be connected, in this case the terminal and armature wire, requires heating the parts to the point of melting. Under Defendants' proposed construction, the terminal and armature wire would be heated to the point of melting, which in turn could cause them to become joined. Under Plaintiff's construction, melting is expressly avoided and the parts are merely softened by the application of heat. Also, the parties differ on the issue of whether the application of pressure to the parts being joined is included within the meaning of the disputed phrase.

In support of its proposed construction, Plaintiff points first to the language of the claims themselves. According to Plaintiff, nothing in Claim 1 or Claim 16 indicates that the fusing method claimed requires heating the terminal and the armature wire to the point of melting them together. In response, Defendants point to the language in the claims that describes the application of "heat sufficient to . . . fuse" the armature wire to the terminal.[1] This language, according to Defendants, specifically describes melting because, they argue, "to fuse" means "to bond" and the fusing described in the claims entails the application of only heat to achieve the resulting bond, *i.e.*, to "mak[e] a fused joint." Said another way, under Defendant's interpretation, the "fusing" described in the disputed phrase is a heat-only process that involves bonding parts through the process of melting them together.

However, Defendants' argument appears to be somewhat circular, as it is dependent upon the construction of the term "fuse," and how this term, as well as the concept of

[1] *S*ection II., 9, *infra*, for further discusses this claim language.

"fusing," is understood by a person of ordinary skill in the art of commutator fusing. *See On Demand Machine Corp. v. Ingram Industries, Inc.*, 442 F.3d 1331, 1337 (Fed. Cir. 2006) ("[T]he proper judicial construction of a claim and its terms is from the viewpoint of a person of ordinary skill in the field of the invention; the court must determine how such a person would understand the claim in the context of the particular technology and the description in the specification, with due reference to the prosecution history."). Persons of skill in the art are deemed to read the claim term "not only in the context of the particular claim in which the patent appears, but in the context of the entire patent, including the specification." *Philips*, 415 F.3d at 1313. Indeed, the *Phillips* court noted that the specification may be the "single best guide to the meaning of a disputed term." *Id.* at 1315.

The specification of the '015 Patent describes the procedure known as "fusing":

> Fusing is a known technique for joining electrically-conductive elements in which a fusing electrode is contacted with one element adjacent the joint so that the fusing electrode forces the elements together. A ground electrode is also contacted with one of the elements, typically at a location remote from the joint, such that an electrical current is passed through the electrodes and at least one of the elements. Heat generated by the electrical current, and the high pressure applied by the fusing electrode, causes a bond to form between the elements.

Nothing in the patent specification indicates that "fusing" requires "melting" of any part to be joined. Nor, according to the specification, does "fusing" appear to be a heat-only process. Rather, the specification describes "fusing" as the joining of electrical conductors through the application of both heat and pressure. This supports Plaintiff's proposed construction of the disputed term.

Similarly, the prosecution history of the '015 Patent and the prior art of a patent

discussed during prosecution further support Plaintiff's proposed construction. It appears that the Patent Examiner had considered the term "fusing" to be synonymous with "welding," which, like Defendants' interpretation of the term, would require melting. However, counsel for Joyal explained to the examiner that "fusing" and "welding" were "entirely different joining techniques." Buckingham Decl.[2], Ex. B at J00198. Counsel explained that "fusing" involved joining elements to one another "under the combined influence of heat transferred from the fusing electrode and pressure applied by the fusing electrode." *Id.* at J00198. Additionally, counsel referred to the prior art Warner '152 patent,[3] which had been cited by the Patent Examiner, and which explained that in "fusing," "the electrode dissipates heat into the assembly to soften the parts without causing them to reach their plastic state. . . . [P]ressure is applied to thereupon force the softened parts together to form the compression joint." Buckingham Decl., Ex. D at col. 1:60-64.

Notwithstanding the above evidence that supports the conclusion that "fusing" or "to fuse" is understood by persons skilled in the art to include the application of both heat and pressure, Defendants argue that the inclusion of "pressure" into the construction of Claim 1 is not permitted under the doctrine of claim differentiation. That doctrine is based on "the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope." *Andersen Corp. v. Fiber*

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[2]The abbreviation "Buckingham Decl." refers to the Declaration of Stephen R. Buckingham dated May 18, 2007.

[3]United States Patent No. 4,034,152, "Termination System For Fusing Aluminum-Type Lead Wires."

Composites, LLC, 474 F.3d 1361, 1369 (Fed. Cir. 2007) (quoting *Karlin Tech. Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971-72 (Fed. Cir.1999)). Defendants point to Claim 4, which states as follows: "The method of claim 1, further included applying a compressive force against said terminal by said electrodes." According to Defendants, if the application of pressure was included in the construction of Claim 1, then Claim 4 would be rendered redundant and superfluous.[4]

Plaintiff responds that the specification makes clear that the application of pressure that is described in Claim 1 is different from the application of pressure set forth in Claim 4, and, therefore, the claims are consistent with the doctrine of claim differentiation. Plaintiff asks the Court, consistent with the doctrine of claim differentiation, to "presume[] a difference in the meaning and scope when different words or phrases are used in separate claims." *Comark Comm., Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998). According to Plaintiff, Claim 4 refers to an optional subsequent step of pressure being applied, which is in addition to the application of pressure during the fusing described in Claim 1. Indeed, Claim 4 expressly uses the term "further," which in ordinary usage means "additional." Furthermore, the specification of the '015 Patent explains that under the fusing process pressure is "once again" applied after the insulation on the armature wire is burned off:

> Once the electrical insulation has been removed, the mounting arm or pistons of the fusing apparatus, under control of the welding unit, is once again operated to cause the fusing and ground electrodes to apply a compressive

[4]Defendants also argue that such a construction would render Claim 4 invalid under 35 U.S.C. § 112, paragraph 4, which requires a dependent claim to "specify a further limitation of the subject matter claimed" in the independent claim. However, the validity of Claim 4 is not at issue here.

> force to the tang to fuse the armature wire (under heat and pressure) to the tang.
> . .

'015 Patent col. 6:20-26.

Additionally, Plaintiff points out that if the inventor had intended to exclude the use of pressure in Claim 1, the claim would not have been written to require that electrodes be moved against the terminal "to form a current path," which, according to Plaintiff, necessitates the use of pressure. *See* discussion in section II.7, *infra*, regarding construction of a phrase that includes the language "to form a current path." Last, Plaintiff references several different patents that describe fusing and which explain that a second application of physical force may occur as part of the fusing process. *See, e.g.*, Buckingham Decl. at Ex. G, Col. 1:24-26. The Court finds that, particularly in light of the teaching of the specification as well the language of Claim 4 itself, the doctrine of claim differentiation does not preclude a construction of Claim 1 that would include the application of pressure.

Considering the plain language of Claims 1 and 16 as well as the specification of the '015 Patent, the patent prosecution history, and relevant extrinsic evidence, the Court shall construe "fusing method of forming a fused joint" consistent with Plaintiff's proposed construction as follows: "a method of making a mechanical surface adhesion bond between electrically conductive elements by applying heat to soften the elements without melting them and pressure to force the softened elements together."

2. "fusing"

The term "fusing" appears in Claims 1 and 16 and is part of the term "fusing method of forming a fused joint," which has been discussed above. Plaintiff argues that the term

"fusing" should not be construed in isolation but rather as part of the term "fusing method of forming a fused joint." Defendants, on the other hand, support an isolated construction of "fusing" as follows: "uniting or blending into a whole by melting together." However, the Court agrees with Plaintiff that a jury will better understand the meaning of "fusing" if the phrase "fusing method of forming a fused joint" is construed as a whole rather than its terms being construed piecemeal. Accordingly, the term "fusing" shall be construed in the context of the phrase "fusing method of forming a fused joint" as set forth above.

3. "fused joint"

The term "fused joint" appears in Claims 1 and 16 and is part of the term "fusing method of forming a fused joint." As with the term "fusing," Plaintiff takes the position that the term "fused joint" need not be construed independently, but rather as part of the phrase "fusing method of forming a fused joint." Defendants argue that the term "fused joint" should be construed as follows: "connection created by fusing." For the same reasons set forth above with regard to the term "fusing," the Court concludes that the term "fused joint" should not be construed independently, and the term shall be construed in the context of the phrase "fusing method of forming a fused joint" as set forth above.

4. "armature wire having electrical insulation thereon"

This term appears in Claims 1 and 16. Plaintiff proposes a construction as follows: "an electrical conductor having an insulating coating used in the windings of an armature, such as magnet wire." Defendants assert that this phrase does not need to be construed because it is not dispositive of either the infringement or invalidity issues in the case.

Alternatively, Defendants offer the following construction: "insulated wire of a moving part of an electromagnetic device." The Court finds that construction of the disputed phrase is appropriate given its significance within the relevant claims.

In support of their respective proposed constructions, Plaintiff points to the specification of the '015 Patent itself, and Defendants cite the definition of "armature" in Webster's College Dictionary (Random House 1991). The Federal Circuit has stated that a general purpose dictionary may be helpful in situations where "the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges." *Phillips*, 415 F.3d at 1314. However, as noted earlier, the *Phillips* court has emphasized the importance of the specification. *Id.* at 1315.

The specification for the '015 Patent states that the invention relates in part to "methods for fusing armature wires having an electrically insulating coating, e.g., magnet wires, to the tangs of a commutator." Buckingham Decl. at Ex. A, col. 1:8-10. The specification also refers to an "armature wire having an electrically insulating coating, e.g., magnet wire." *Id.* at col. 1:51-53. Consequently, the Court finds Plaintiff's proposed construction to be more consistent with the specification of the '015 Patent. The Court, therefore, shall construe "armature wire having electrical insulation thereon" as meaning "an electrical conductor having an insulating coating used in the windings of an armature, such as magnet wire."

5. "terminal"

This term appears in Claims 1 and 16. Plaintiff's proposed construction is as follows:

"a device attached to an electrical apparatus for convenience in making connections, such as a tang." Defendants assert that this phrase does not need to be construed, but, alternatively, offer the following construction: "point of connection." Both parties cite general purpose dictionaries in support of their proposed constructions, and Plaintiff also references the language of the claims and the specification. The Court finds that construction of "terminal" is appropriate, and also finds that this is a situation where "claim construction . . . involves little more than application of the widely accepted meaning of commonly understood words." *Phillips*, 415 F.3d at 1314. Webster's College Dictionary, cited by Defendants, sets forth twelve definitions for the word "terminal," the most relevant being "the mechanical device by which an electric connection to an apparatus is established." Similarly, Webster's Ninth New Collegiate Dictionary, cited by Plaintiff, has among its several definitions of the word "terminal" the following: "a device attached to the end of a wire or cable or to an electrical apparatus for the convenience of making connections." Additionally, looking at both the context of the language of Claims 1 and 16 as well as the specification of the '015 Patent, a "terminal" in the '015 Patent includes a tang attached to the commutator bar for allowing a connection between the armature wire and the commutator bar. Accordingly, the Court shall construe "terminal" consistent with Plaintiff's proposed construction as "a device attached to an electrical apparatus for convenience in making connections, such as a tang."

6. "commutator bar"

This term appears in Claims 1 and 16. Plaintiff proposed construction is "a bar or segment connected to an armature of a motor or generator, which may include a carbon block

bonded thereto." Defendant asserts that the term need not be construed, but, alternatively, proposes a construction as follows: "rigid piece of metal used for the electrical connection to the moving part of a motor." Again, both parties cite general purpose dictionaries in support of their proposed constructions, and Plaintiff also cites a portion of the specification that refers to commutator bars that have "been covered with a block of carbon material." Buckingham Decl. at Ex. A, col. 2:31-40. Webster's New Collegiate Dictionary (cited by Plaintiff) defines "commutator" as "a series of bars or segments so connected to armature coils of a dynamo [*i.e.*, a motor or generator] that rotation of the armature will in conjunction with fixed brushes result in unidirectional current." Buckingham Decl. at Ex. C. Similarly, Webster's College Dictionary (cited by Defendant) defines "commutator" as "(in a DC motor or generator) a ring or disk assembly that works to change the frequency or direction of current in the armature windings." Pospis Decl. at Ex. J. "Bar" is defined as "a relatively long, evenly shaped piece of . . . metal . . . for some mechanical purpose." *Id.* Further, "armature" is defined as "the rotating part of a dynamo." Taking into account these common understandings of the relevant terms, the Court shall construe "commutator bar" consistent with Defendants' proposed construction as "rigid piece of metal used for the electrical connection to the moving part of a motor."

7. "moving a pair of spaced apart heating electrodes against another surface of said terminal to form a current path between said electrodes through a portion of said terminal extending there between"

This phrase appears in Claims 1 and 16. Plaintiff's proposed construction is as follows: "moving two side-by-side heating electrodes into compression contact with a surface

of the terminal (other than a surface in contact with the wire) with sufficient pressure to establish and maintain electrical continuity between the electrodes and the terminal to allow a flow of electrical current through the electrodes and the portion of the terminal between the electrodes." Defendants, on the other hand, assert that the disputed phrase means "moving two electrodes against a surface of the terminal other than the surface in contact with the wire to allow a flow of electricity between said electrodes through a portion of said terminal extending therebetween."

Looking first to the beginning of the disputed phrase "pair of spaced apart heating electrodes," Defendants proposed construction would replace this phrase simply with "two electrodes." Such a construction is overly broad, and completely ignores the terms "spaced apart" and "heating." Plaintiff, on the other hand, proposes that "pair of spaced apart heating electrodes" be construed as "two side-by-side heating electrodes," which is more consistent with the claim language itself as well as the specification of the '015 Patent. Indeed, in the drawings and written description of the '015 Patent the heating electrodes are consistently depicted and described in a side-by-side relationship.

The parties disagreement regarding the remainder of the disputed phrase centers on the term "against" or, perhaps more accurately, the phrase "moving . . . against . . . said terminal to form a current path." Plaintiff argues that a person of ordinary skill in the art would understand this phrase to involve movement of the electrodes into "compression contact" with the terminal with sufficient pressure to establish and maintain electrical continuity. In support of its argument, Plaintiff points to the specification, as well as the testimony of the parties and

other extrinsic evidence. For example, the specification states that "[t]he primary function of the fusing apparatus is to bring the free end of the fusing and ground electrodes into compression contact with the tang." '015 Patent col. 4:64-66 (emphasis added). The specification later again describes that "the fusing and ground electrodes are brought down via mounting arm or piston under control of the welding control unit into contact with tang," and that current is applied to generate heat only "once electrical continuity has been established between the fusing and ground electrodes." '015 Patent col. 6:5-10; *see also* col. 7:19-21 ("fusing electrode is brought down into compression contact with the tang").

Plaintiff also cites the testimony of Defendants' engineer, Douglas Walz, as well as the inventor of the '015 Patent, Edward Riordan. The testimony of both teach that pressure to the electrodes must be applied and maintained in order to establish electrical continuity. *See* Buckingham Decl., Ex. U at 34-35, 52-54; Ex. V. at 67-70. Although, as Defendants argue, the particular testimony cited may relate to the fusing process generally as opposed to the '015 Patent specifically, the testimony is highly relevant to understanding how a person skilled in the art would construe the disputed claim terms.

Last, Plaintiff refers to other extrinsic evidence, namely technical journal papers and patents regarding fusing, that is consistent with the understanding that in order to "form a current path" electrodes must be moved against the terminal with sufficient pressure to establish electrical continuity. *See* Buckingham Decl. at Ex. P at 598 ("Low pressure when power is first applied can result in a poor contact between the electrode and the tang, resulting in arcing and possible destruction of the tang"); Ex. H at col.3:45-53 ("Downward force is

applied by fusing electrode . . . until firm and extensive contact has presumably been established . . . It is then safe to begin passing substantial electrical current"); Ex. J at J01488 ("fusing to take place only when a predetermined electrode pressure is reached"); Ex. K at J01505 ("The most foolproof system is a spring override, which activates the fusing transformer when a given pressure is reached"); Ex. O (during initial stage of fusing, the"objective ... is to achieve a consistent, reliable contact between the fusing electrode and the commutator tang prior to initiating current flow").

The Court concludes that a person of ordinary skill in the art would understand the phrase "moving . . . against . . . said terminal to form a current path" to mean movement of the electrodes into compression contact with the terminal with sufficient pressure to both establish and maintain electrical continuity. Accordingly, the Court shall construe the phrase "moving a pair of spaced apart heating electrodes against another surface of said terminal to form a current path between said electrodes through a portion of said terminal extending there between" consistent with Plaintiff's proposed construction as follows: "moving two side-by-side heating electrodes into compression contact with a surface of the terminal (other than a surface in contact with the wire) with sufficient pressure to establish and maintain electrical continuity between the electrodes and the terminal to allow a flow of electrical current through the electrodes and the portion of the terminal between the electrodes."

8. "material having a high electrical resistance"

This phrase is found in Claims 1 and 16. Plaintiff argues that this phrase should be construed as "a metal, alloy or other material, such as tungsten, molybdenum or Elkonite

(copper-tungsten alloy) having a higher electrical resistance than copper." Defendants assert that the phrase need not be construed, and the Court agrees. Because the Court sees no ambiguity as to the meaning of the phrase "material having a high electrical resistance" and because its ordinary and customary meaning is clear to one skilled in the art, the Court declines to construe the phrase as it is used in the '015 Patent.

9. "heat said terminal sufficient to remove said electrical insulation from said armature wire in contact with said terminal and to fuse said armature wire thereto"

This phrase is found in Claims 1 and 16. While the parties are substantially in agreement as to the construction of the first part of the disputed phrase -- "heat said terminal sufficient to remove said electrical insulation from said armature wire in contact with said terminal" -- the parties differ with respect to their interpretation of the second portion of this phrase, *i.e.*, "heat . . .sufficient . . . to fuse said armature wire thereto." More specifically, the disagreement centers on the meaning of "fusing" as that term is used in the '015 Patent. Consistent with its position with respect to the meaning of "fusing," Plaintiff asserts the phrase "heat said terminal sufficient to remove said electrical insulation from said armature wire in contact with said terminal and to fuse said armature wire thereto" should be construed as "heat the terminal sufficiently to remove the insulation on the armature wire, such as by vaporizing it, and soften the terminal enough to permit the formation through pressure of a mechanical surface adhesion bond between the terminal and wire." Defendants, on the other hand, argue that the phrase means "heat the terminal sufficiently to remove the insulation on the armature wire, such as by vaporizing it, and to melt said wire and/or said terminal resulting in a joint between the terminal and the wire." This is consistent with Defendants'

position, discussed earlier, that "fusing" as used in the '015 Patent involves "melting" of the armature wire and/or terminal.

As discussed in section II.1, *supra*, there is no evidence in the intrinsic record of the '015 Patent or in the extrinsic evidence to support Defendants' contention that "fusing" involves "melting." The evidence, rather, supports Plaintiff's understanding of the term "fusing" as well as Plaintiff's proposed construction of "heat said terminal sufficient to remove said electrical insulation from said armature wire in contact with said terminal and to fuse said armature wire thereto." *See* section II.1, *supra*. Accordingly, the Court will construe the phrase "heat said terminal sufficient to remove said electrical insulation from said armature wire in contact with said terminal and to fuse said armature wire thereto" as follows: "heat the terminal sufficiently to remove the insulation on the armature wire, such as by vaporizing it, and soften the terminal enough to permit the formation through pressure of a mechanical surface adhesion bond between the terminal and wire."

10. "applying a compressive force against said terminal by said electrodes"

This phrase appears in Claim 4, which states as follows: "[t]he method of claim 1, further including applying a compressive force against said terminal by said electrodes." Plaintiff asserts that this phrase means "using the electrodes to apply additional pressure against the terminal after the insulation has been removed from the armature wire." In support of its construction, Plaintiff refers to that part of the specification of the '015 Patent, discussed above, that explains that under the fusing process, pressure is "once again" applied after the insulation on the armature wire is burned off. *See* '015 Patent, col. 6:20-25. Plaintiff also

notes that Claim 4 uses the term "further." Last, Plaintiff points to certain extrinsic evidence, such as deposition testimony and prior patents, also discussed above, which support its assertion that Claim 4 refers to a second, subsequent application of pressure than that referred to in Claim 1. Defendants take issue with Plaintiff's construction insofar as it interprets the disputed phrase as describing "additional" pressure. As discussed in section II.1, *supra*, Defendants have taken the position that under the proper construction of Claim 1, there is no "pressure" step in Claim 1, but rather the application of pressure is initially occurs as described in Claim 4. However, the Court finds that the evidence does not support such a construction of these claims.

Defendants proposed construction of this phrase in Claim 4 is "using the electrodes to press against the terminal." In support of this proposed construction Defendants cite only to the Webster's dictionary definition of "compressive." However, considering the evidence cited by Plaintiff, the Court shall construe the phrase "applying a compressive force against said terminal by said electrodes" consistent with Plaintiff's proposed construction as follows: "using the electrodes to apply additional pressure against the terminal after the insulation has been removed from the armature wire."

11. "U-shaped profile"

This phrase is found in Claim 5. Plaintiff argues that this phrase should be construed as "having a profile generally in the shape of the letter 'U'." Defendants assert that the phrase need not be construed, and the Court agrees. Because the Court see no ambiguity as to the meaning of the phrase "U-shaped profile" and because its ordinary and customary meaning is

clear to one skilled in the art, the Court declines to construe the phrase as it is used in the '015 Patent.

12. "brush track"

This term is found in Claim 16. The parties are nearly in agreement on the construction of this term, with relatively minor differences in their proposed constructions. Plaintiff offers the following: "the area of the commutator bar, including any carbon block bonded thereto, which is slidingly engaged by the brushes of the motor or generator." Defendants, on the other hand, assert that the disputed term means "the area of the commutator bar which is slidingly engaged by the brushes of the dynamoelectric device." As found in the prosecution history of the '015 Patent, Plaintiff's patent counsel explained to the Patent Examiner that "[t]he brush track is that area of the commutator bar which is slidingly engaged by the brushes of the dynamoelectric device." Buckingham Decl., Ex. B at J00199. Defendants' prosed construction tracks this language exactly. Plaintiff's construction, while similar, adds reference to the "carbon block" that may be bonded to the commutator bar. The Court agrees, however, with Defendants' assertion that whether a carbon block has been bonded to the commutator bar is not relevant to the definition of "brush track." Therefore, the Court shall construe "brush track" as "the area of the commutator bar which is slidingly engaged by the brushes of the dynamoelectric device."

13. "base"

This term is used in Claim 16. Plaintiff asserts that this phrase should be construed as "curved section." Defendants assert that the term need not be construed, and the Court agrees.

Because the Court see no ambiguity as to the meaning of the term "base" and because its ordinary and customary meaning is clear to one skilled in the art, the Court declines to construe the phrase as it is used in the '015 Patent.

14. "pair of spaced members"

This phrase is found in Claim 16. Plaintiff proposes the following construction: "two parts separated by a distance that form the sides of the U-shaped terminal." Defendants assert that the phrase need not be construed, and the Court agrees. Because the Court see no ambiguity as to the meaning of the phrase "pair of spaced members" and because its ordinary and customary meaning is clear to one skilled in the art, the Court declines to construe the phrase as it is used in the '015 Patent.

15. "inner surface of said base"

This phrase is found in Claim 16. Plaintiff proposes the following construction: "inner surface of the curved section of the U-shaped terminal." Defendants assert that the phrase need not be construed, and the Court agrees. Because the Court see no ambiguity as to the meaning of the phrase "inner surface of said base" and because its ordinary and customary meaning is clear to one skilled in the art, the Court declines to construe the phrase as it is used in the '015 Patent.

16. "an outer surface of one of said members"

This phrase is found in Claim 16. Plaintiff proposes the following construction: "a surface on the outside of the U-shaped terminal." Defendants assert that the phrase need not be construed, and the Court agrees. Because the Court see no ambiguity as to the meaning of

the phrase "an outer surface of one of said members" and because its ordinary and customary meaning is clear to one skilled in the art, the Court declines to construe the phrase as it is used in the '015 Patent.

III. Conclusion

For the reasons set forth above, the terms at issue will be construed as indicated. An appropriate Order shall accompany this Opinion.

/s/ JOEL A. PISANO
United States District Judge

Dated: October 26, 2007